The general idea behind **backward**-selection is to start with the full model and eliminate one variable at a time until the ideal model is reached.

* p-value method:

1. Start with the full model.
2. Drop the variable with the highest p-value and refit the model.
3. Repeat until all remaining variables are significant.

* adjusted R^2*R*2 method:

1. Start with the full model.
2. Refit all possible models omitting one variable at a time, and choose the model with the highest adjusted R2.
3. Repeat until maximum possible adjusted R^2*R*2 is reached.

**LO 5.** The general idea behind forward-selection is to start with only one variable and adding one variable at a time until the ideal model is reached.

* p-value method:

(1) Try all possible simple linear regression models predicting y using one explanatory variable at a time. Choose the model where the explanatory variable of choice has the lowest p-value.

(2) Try all possible models adding one more explanatory variable at a time, and choose the model where the added explanatory variable has the lowest p-value.

(3) Repeat until all added variables are significant.

* adjusted R^2 method:

1. Try all possible simple linear regression models predicting y using one explanatory variable at a time. Choose the model with the highest adjusted R^2*R*2.
2. Try all possible models adding one more explanatory variable at a time, and choose the model with the highest adjusted R^2*R*2.
3. Repeat until maximum possible adjusted R^2*R*2 is reached.